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IMF CONDITIONALITY AND ARMED CIVIL CONFLICT:

AN ANALYSIS OF SUB-SAHARAN AFRICA

by

CLAIRE D. GOWEN

Under the Direction of Carrie L. Manning

ABSTRACT

Since gaining independence, sub-Saharan Africa has experienced periods of internal conflict at higher rates than other regions. The region has also experienced protracted economic problems. Many African countries have implemented International Monetary Fund (IMF) programs designed to improve a state's long-term economic viability. IMF conditionality, however, has led to a host of problems in sub-Saharan Africa that potentially increase the risk of experiencing internal conflict. The results of this research demonstrate that the implementation of the Enhanced Structural Adjustment Facility significantly increases a country's risk of experiencing armed civil conflict. Neither the Structural Adjustment Facility nor the Poverty Reduction and Growth Facility have the same affect, though prior conflict, higher GDPs, negative GDP growth, moderate levels of social fractionalization, transitional regimes and the presence of enclave economies do increase conflict risk.

INDEX WORDS: Africa, Conditionality, Conflict, Economic Development, International Monetary Fund, Structural Adjustment

IMF CONDITIONALITY AND ARMED CIVIL CONFLICT:  
AN ANALYSIS OF SUB-SAHARAN AFRICA

by

CLAIRE D. GOWEN

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Arts  
in the College of Arts and Sciences  
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2007

IMF CONDITIONALITY AND ARMED CIVIL CONFLICT:

AN ANALYSIS OF SUB-SAHARAN AFRICA

by

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## LIST OF ABBREVIATIONS

CIA	Central Intelligence Agency
ECA	Economic Commission for Africa
ESAF	Enhanced Structural Adjustment Facility
GDP	Gross Domestic Product
HIPC	Heavily Indebted Poor Country
IFI	International Financial Institution
IMF	International Monetary Fund
PRGF	Poverty Reduction and Growth Facility
SAF	Structural Adjustment Facility
SIPRI	Stockholm International Peace Research Institute
WDI	World Development Indicators



## INTRODUCTION

Does International Monetary Fund (IMF) conditionality lead to an increased risk of violent civil conflict in sub-Saharan African states? Since gaining independence, many sub-Saharan African countries have experienced periods of internal conflict and civil war at a higher rate than other regions. In fact, the Stockholm International Peace Research Institute stated in its 1999 *Yearbook of World Armaments and Disarmaments* that “Africa is the most conflict ridden region of the world and the only region in which the number of armed conflicts is on the increase” (SIPRI 1999). The disastrous effects of these wars include economic stagnation, political instability and humanitarian crises—all of which worsen the longer a conflict lasts. These consequences have been well documented, yet the international community still faces numerous challenges with regard to resolving and preventing such conflict. This inadequacy is due in part to an incomplete understanding of the underlying conditions that facilitate insurgency efforts. Thus it is necessary to examine more closely the possible roots of such conditions.

The factors contributing to civil war are complex and involve numerous variables. Some of the more recognized factors include economic grievances, lootable resources, regime type, social fractionalization, population pressure, geography and prior history of conflict. The economic woes of poorer countries contribute to the onset of conflict, largely because the foregone income of would-be insurgents is very low. Recruitment and retention of fighters is thus much easier to maintain. The presence of an easily exploited resource base may also be problematic if conflict participants are profiting from these resources. The type of regime a country has is also important, as many scholars have linked transitional governments to higher rates of internal strife. Another factor that

has received substantial attention is population pressure. Many argue that when more people are competing for increasingly scarce resources, civil violence is more likely to erupt. Difficult geography, such as mountainous regions or dense forest cover, may also facilitate insurgent efforts because they are better able to organize without detection. Finally, a country with a prior history of internal conflict could be more likely to experience conflict in the future, though this effect fades with time.

The role of International Financial Institutions (IFIs) in causing civil conflict has received much less attention. In particular, International Monetary Fund programs such as the Structural Adjustment Facility (SAF), the Enhanced Structural Adjustment Facility (ESAF) and the Poverty Reduction and Growth Facility (PRGF) include conditions that are designed to improve a state's long-term economic viability. These programs have received substantial criticism, mainly due to the short-term shocks resulting from requirements such as decreased social spending and currency devaluation. Few have explored how these conditions may actually increase a country's risk of experiencing civil conflict. IMF conditionality may create circumstances ripe for conflict in three ways. First, decreased social spending in sectors such as health care and education may lead to increased grievances and more willing insurgents. In addition, IMF conditions place severe restrictions on patronage systems, which may decrease African states' capacity to prevent rebellion. Finally, because of reductions in military expenditures, armed forces may not be as able to suppress internal violence when it does arise.

The goal of this project was to test the hypothesis that the implementation of the IMF's Structural Adjustment Facility, Enhanced Structural Adjustment Facility or Poverty Reduction and Growth Facility increases the risk of sub-Saharan African

countries experiencing violent civil conflict. Violent civil conflict is defined by the Uppsala Armed Conflicts Dataset as conflict incurring more than 25 battle deaths per year. The hypothesis was tested using the Cox variant of a discrete time, repeated events duration model. Because internal conflict is not solely attributable to a single variable, the model included measures of the following control variables: economic grievances, a lootable resource base, regime type, social fractionalization, population pressure, geography, prior conflict history and implementation of other forms of conditionality.

This paper begins with a review of the theoretical underpinnings of the causes of civil conflict, including the control variables of economic grievances, exploitable resources, regime type, social fractionalization, population pressure, geography and prior conflict history. Following will be a discussion of how the primary independent variable, IMF program implementation, may increase grievances and limit a state's capacity to prevent and manage armed conflict. A description of the research design follows, including an explanation of the methods of operationalizing the key variables and a description of the duration model. The analysis concludes with the results and implications for future analysis.

## **REVIEW OF THE LITERATURE**

Violent civil conflicts have many consequences, all of which become progressively worse as duration increases. In the sub-Saharan African context, this is particularly problematic because civil wars in Africa typically last longer than those in other regions (DeRouen and Sobek 2004). As such, the factors contributing to internal conflict have received much international attention. Some of the most prominent variables include economic grievances, exploitable resources, regime type, social fractionalization, population pressure, and prior civil conflicts. Cuts in public spending, declining state capacity, and reduced military capability are additional important factors, which I will link to the implementation of IMF programs. The following review highlights the theoretical bases of each.

### **Economic Grievances**

Economic deprivation is a strong indicator of the onset of violent internal conflict. Africa is characterized by exceptionally poor economic conditions, and it has also been the region with the highest rates of internal conflict in recent history (Collier and Hoeffler 2002). What might the reasons be for this correlation? A number of dynamics contribute to increased incidence and length of armed intrastate conflicts in poor countries. First, in states with stronger economies the costs of war are higher, thus making prolonged conflict unattractive. In poorly performing economies, however, mobilization of potential insurgents is not as difficult. Mobilization is enabled when economic grievances are high: potential rebels may have extremely limited economic opportunities, thus their

forgone income is very low (Collier and Hoeffler 2004). This dynamic is essential to the sustenance of an insurgency—if a rebellion is unable to recruit and retain enough fighters it will not be able to pose a significant threat to state forces. Empirical evidence supports this hypothesis: Collier, Hoeffler and Söderbom (2004) find that overall poverty, as measured by per capita income, is a reasonably significant indicator for the onset of civil war.

Despite these findings, the theoretical support for economic grievance factors of the onset of civil conflict is perhaps stronger than the actual empirical data. Studies have demonstrated covariation among the variables, but poor economic performance is also characteristic of many sub-Saharan African states that have not experienced violent civil conflict. Another possible explanation of why some countries are vulnerable to civil conflict is the availability of a lootable resource base.

### **Lootable Resources**

Berdal and Malone (2000) write extensively on the topic of economic agendas and civil war. They point out that war may not be simply a means to an end, as is often thought, but it may be an end in and of itself. In states where poverty is rampant, war may provide the opportunity for some groups to take advantage of resources to which they may not have previously had access. The presence of lootable resources thus becomes another major factor in the onset of civil war, as it may be more profitable to some groups than peace.

Collier and Hoeffler (2004) also point out that profitable opportunities play a major role in internal conflict. This opportunity is often marked by the existence of an

exploitable natural resource. Murshed (2002) agrees with this analysis. He cites the tendency for mineral-rich states such as Angola and Sierra Leone to be more vulnerable to conflict because of the availability of capturable rents from these resources.

Leonard and Strauss (2003) refine this argument, stating that the mere existence of exploitable natural resources is not a sufficient explanation. The authors develop the concept of the enclave economy, in which production is geographically concentrated. This relative isolation makes resources more lootable, thus increasing their attractiveness to insurgents and state forces alike.

While many resource-rich African countries have seen high rates of violent internal conflict, other resource-poor countries have also experienced civil war. One might then conclude that other factors are at work.

### **Regime Type**

An additional factor in predicting civil war is that of regime type. For example, Kadera et al. (2003) model the linkages between states' domestic political system and conflict. Their findings suggest that initial increases in the strength of democracy are associated with higher instances of conflict. However, as democratic systems strengthen beyond a certain threshold the likelihood of experiencing conflict goes down. Ultimately their findings suggest that the traditional view of democracies being more immune to conflict only holds when the democracy is well-established and possesses a certain amount of strength.

Hegre et al. (2001) extend this thesis and posit that civil wars are more likely in transitional regimes. Thus, not only are established democracies more likely to avoid

internal conflict, so are extremely repressive authoritarian states. The authors use a multivariate analysis to demonstrate the relationship between democracy and domestic strife. In essence they rely on the notion that intermediate regimes are partially open, but still possess repressive characteristics. The repression leads to grievances, which then incite groups to organize and engage in anti-government activities, which is possible because of a certain level of openness.

These findings suggest that certain political systems may be more vulnerable to the onset of civil violence. However, there are still many other recognized causes of civil war. The following section will provide a brief overview of fractionalization, another of these factors.

### **Social Fractionalization**

The impact of ethnic divisions on civil conflict, whether based on language, religion or other characteristics, has perhaps received the most attention from the international community. This attention is not surprising given the atrocities associated with ethnic conflicts in countries such as Rwanda and Burundi. The origin of such intractable divides is often attributed to the practices of colonial powers, who often favored certain ethnic or religious groups over others (Chazan et al 1999, Murshed 2002). The consequences of such practices resulted in more rigid social identities than had existed prior to colonization. Furthermore, by encouraging these identities colonial powers did little to foster a sense of territorial nationalism (Welsh 1996). Despite this trend, violent ethnic and/or religious conflict is actually a rare occurrence (Brubaker and Laitin 1998). Social identity, however, provides a rallying point—one that may assist a

rebel movement in overcoming collective action problems (Murshed 2002).

Many scholars have noted that moderate levels of ethnic and religious fractionalization contribute to the onset of violent civil conflict (Elbadawi and Sambanis 2000; Murshed 2002; Collier, Hoeffler, and Söderbom 2004; Fearon 2004). One would not expect to observe high rates of conflict where fractionalization is very low or very high for similar reasons. In especially homogenous societies, social minorities are so small that even if identity-based grievances exist, the minorities are unlikely to possess enough power relative to the majority in order to mount an insurgency. Likewise, in highly diverse societies groups will face more challenges either in organizing against one another or in uniting against a common enemy (Buhaug and Gates 2002, Murshed 2002, Collier and Hoeffler 2004, Hegre 2004).

However, when a small number of ethnic or religious groups exist in a state, they are more likely to be polarized against one another (Buhaug and Gates 2002, Murshed 2002). If this lower level of diversity is accompanied by noticeable inequalities between the groups, rebel groups are able to mobilize potential fighters by exploiting such divisions.

Despite the preceding evidence, ethnic fractionalization alone cannot explain the onset of violent civil conflict. Many states are characterized by ethnic divisions, but these divisions frequently do not lead to armed conflict. Grievances are often based on scarce resources, which the following section will address.

### **Resource Scarcity and Population Pressures**

Another prominent theory of conflict involves the conflict over scarce resources.



Many scholars, including Fearon and Laitin (2003), argue that this conflict is driven by large populations and is a major causal factor of civil war.

Homer-Dixon cites vast populations in developing lands as being one of the major causes of conflict (1994). Resource depletion, land scarcity and unequal distribution are all sources of violence. Maxwell and Reuveny (2000) elaborate on this theory, citing that if conflict results in resource destruction, then the political system may be further destabilized, resulting in veritable collapse.

These viewpoints may reflect a popular sentiment in the international community, but they are not supported by the evidence. Tir & Diehl (1998) find only a modest relationship between population growth pressures and violent conflict in general. Furthermore, they were unable to link population growth to conflict at the nation-state level. Hauge and Ellingsen (1998) also find only modest linkages between population and conflict, and go on to suggest that political and economic factors may be more important. Ridgeway and Jacques (2002) are more mistrusting of the population-conflict link, citing that such a limited focus disguises inherent problems with unequal distribution patterns.

### **Difficult Geography**

The role of physical geography in conflict has received increasing attention. Rough terrain may contribute to increased risk for civil conflict because rebels are better able to hide their activity from government forces. Buhaug and Gates, however, find no empirical evidence that either forest cover or mountainous regions affect the scope of conflict, but they do not test for the possibility that these factors affect the onset of

conflict (2002). In contrast, Fearon and Laitin find evidence that geography may have a significant impact on facilitating insurgency (2003). However, their analysis is self-admittedly limited. In defining difficult geography, the authors simply coded the variable according to the existence of mountainous regions in a state. They did not account for other impenetrable areas such as dense forest cover. DeRouen and Sobek (2004) also examine the effects of physical geography on insurgency efforts. They find that states with mountainous regions, but not those with dense forest cover, facilitate rebel movements.

### **Prior History of Civil Conflict**

Numerous scholars recognize that countries with a history of civil conflict are more likely to experience civil conflict in the future. In 1973, Hibbs found that internal war was significantly more likely if a country had experienced civil war in the past. Hegre et al. advanced this argument by demonstrating that “time heals all wounds,” and the effect of past conflicts fades as the years pass (2001, 37). Collier and Hoeffler find repeated support for this assertion, further refining it by demonstrating that countries are most at risk of a renewal of violence in the first five years after the previous conflict has ended (2002, 2004). After this initial period, the risk gradually fades.

## **IMF CONDITIONALITY AND ARMED CIVIL CONFLICT**

The level of state capacity is very important to the prevention and management of armed conflicts. As Fearon and Laitin (2003, 75-76) point out, “financially, organizationally, and politically weak central governments render insurgency more feasible and attractive.” Other scholars support this claim, citing that weak domestic institutional structures and state incapacity can lead to increased opportunities for insurgents (Reynal-Querol 2002). Few have examined how IMF conditionality may actually decrease state capacity, thus increasing a country’s risk of experiencing civil conflict. Conditions placed on IMF loans may increase this risk through three avenues. First, cuts in social spending and public goods may increase grievances among the population. Second, conditions often limit the availability of patronage resources that would otherwise appease potential insurgents. Finally, restrictions on military spending may decrease a state’s ability to quash rebellions when they do occur. This section will begin with a historical overview of IMF programs in sub-Saharan Africa. Following will be a discussion of the three processes through which IMF conditionality may increase the risk of violent civil conflict.

African leaders have historically dealt with problems of weak state capacity by relying on patronage networks designed to appease certain segments of the population (Herbst 1990, Riddell 1992). Patronage systems allow governments to provide a variety of resources such as jobs, favorable import quotas and access to government contracts to their preferred clients and supporters. This kind of state intervention led to a host of economic problems such as currency overvaluation and distorted prices (Fearon 1988,

Herbst 1990, Collier and Gunning 1999). The patron-client system, however, served important functions by appeasing potentially restive populations, thereby reducing threats to political stability (Herbst 1990). In addition, patronage systems often provided increased funding for the military and police (Riddell 1992). Therefore, if violence did erupt, the military would arguably be more capable of suppressing such displays. Nevertheless, economic problems trumped other concerns, particularly when African countries began to face overwhelming financial crises in the early 1980s.

Africa's economic troubles during this time can be traced to both internal and external forces. Exogenous shocks such as the collapse of primary commodity markets and a rise in fuel prices were intensified by domestic policies that resulted in large budget and trade deficits (Fearon 1988, Riddell 1992). As a result of these problems, African countries increasingly turned to IFIs such as the International Monetary Fund for assistance. The IFIs responded with the development of structural adjustment programs. The IMF first launched the Structural Adjustment Facility (SAF) in 1986. Under this facility, low-income countries were able to borrow up to 63.5 % of their IMF quota over three years, to be disbursed in annual installments. In exchange, these countries were expected to develop a medium-term policy framework for overcoming balance of payments problems (Boughton 2001). The SAF focused primarily on implementing monetary, fiscal and exchange rate policies such as deficit reduction, cuts in public spending and currency devaluation. Fiscal adjustments led to an increased focus on unproductive spending in general, including excessive military spending (Davoodi et al 2001).

Performance under the SAF, however, was somewhat disappointing. Many argued that the resources available to countries under the SAF were too small to have much of an effect. The IMF encouraged additional bilateral assistance to supplement SAF loans, with little success. Furthermore, IMF staff and management believed that conditions attached to SAF programs were not strong enough to ensure that program objectives would be achieved (Boughton 2001). As a result, the IMF reviewed the SAF and proposed several changes.

In 1987 the IMF established the Enhanced Structural Adjustment Facility (ESAF), a concessional lending instrument that would be available to poor countries in addition to the original SAF (IEO 2005).<sup>1</sup> The ESAF greatly expanded the amount of financing available to low-income borrowers: countries were now allowed to draw up to 250% of their IMF quota over three years, or even up to 350% in exceptional circumstances (Boughton 2001). The ESAF relied more heavily on structural conditions “intended to complement and buttress macroeconomic policies, raising the likelihood that program objectives will be attained” (Ghosh et al. 2005, 143). Structural measures included improving the tax structure, strengthening public expenditure management, privatizing state-owned enterprises, liberalizing trade and removing subsidies (Fearon 1988, Riddell 1990, IMF 1997, Ghosh et al. 2005). The intended effect was to instill sound macroeconomic policies that would both overcome immediate financial difficulties and also ensure long-term economic sustainability (IMF 1997, Paris 2004). The expansion of conditionality associated with the ESAF demonstrates an important characteristic of IMF programs: they tend to impose more severe conditions as the level of assistance increases

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<sup>1</sup> SAF programs were gradually phased out after the introduction of the ESAF. All structural adjustment financing fell under the ESAF after 1995.

(Fearon 1988). This is most likely because states in need of more extensive financial assistance are more readily persuaded to accept these severe conditions.

After implementation, structural adjustment programs received much criticism because these narrowly focused and inflexible IMF policies tend to ignore the short-term consequences of rapid liberalization (Collier and Gunning 1999). This oversight was especially significant in relation to currency devaluation and limits on public spending. The primary objection was that adjustment policies overlooked distributional effects and thus widened economic inequality. Overnight increases in unemployment and sudden price increases had particularly adverse effects on poorer segments of the population. Furthermore, limits on public spending often resulted in decreased funding for health and education, which dealt another blow to disadvantaged sectors of society (Fearon 1988, Riddell 1992, Collier and Gunning 1999). It is thus not surprising that structural adjustment became the target of substantial criticism.

Presumably in response to growing disapproval, the IMF replaced the ESAF with the Poverty Reduction and Growth Facility (PRGF) in 1999 (IMF 2005). The PRGF represented the IMF's effort to broaden its focus from macroeconomic stabilization to include growth and poverty reduction. Whereas poverty reduction had only received fleeting attention in previous structural adjustment documents, the new PRGF-supported programs were underscored by comprehensive country-owned poverty reduction strategies and an emphasis on pro-poor spending. In addition, the PRGF aimed to streamline conditionality by establishing guidelines focusing on parsimony and criticality of conditions. Internal assessments have shown that, under the PRGF, conditionality is used less frequently and is more focused on macroeconomic policy than on structural

measures (IEO 2005). IMF critics nonetheless persist, citing that the new poverty programs are little more than a new label. The policies are still very narrowly focused, inflexible, and have done little to actually reduce poverty (Bird 2004, Gomez and Lawson 2005, Gottschalk 2005).

In addition, IMF conditionality may increase a country's risk of civil conflict in several ways. First, cuts in social spending and public goods may increase grievances in the population, therefore making insurgency more attractive. In its 2003 Economic Report on Africa, the Economic Commission for Africa (ECA) stressed that a macroeconomic program not addressing issues of social and political grievances could be very dangerous, even in countries not affected by civil conflict. The provision of public goods is an essential government function, and restricting this function with spending cuts may contribute to higher levels of social unrest. For example, in 1990 the Rwandan government devoted 5.4% of its revenue to social spending. By 1992, one year after Rwanda implemented an IMF-led structural adjustment program, that amount had fallen to 1.7% (WDI 2007). The root causes of the ensuing conflict and genocide in Rwanda clearly run much deeper than decreases in social spending. It is possible, however, that cuts in public goods helped exacerbate an already-tense situation.

Another way that IMF programs may increase the risk of conflict is by limiting patronage resources. IMF conditionalities resulted in serious strain for patron-client systems, which was one main goal of the policies. According to Stedman, "economic conditionality cut at the heart of the patrimonial state" (1996, 243). Austerity measures severely restricted state spending, which led to a marked decrease in the state's ability to provide side payments or other concessions to their clients. Many states were required to

cap domestic credit expansion, limiting the flow of patronage to government officials (Fearon 1988). Furthermore, cuts in bureaucratic jobs and a greater role for the private sector decreased support for the political elite (Howe 2001). These reductions in patronage resources make the state more vulnerable to political crisis, in part because it is much less flexible in managing grievances (Herbst 1990). Empirical evidence seems to support this claim: Lindenberg and Devarajan (1993) found that merely participating in a structural adjustment program increases the likelihood of regime collapse: 27% of regimes that undertook structural adjustment collapsed during its implementation, compared with a 9% rate of collapse among regimes that had not participated in such programs. This seems to suggest that the resulting cuts in patronage resources may lead to increased risk of rebellion.

Finally, reductions in military spending may decrease a state's ability to suppress armed uprisings when they do occur. IMF-supported programs have accounted for an 11% decrease in military spending since the end of the Cold War (Davoodi et al. 2001). Such decreases are desirable in cases where military spending is excessive and where regime accountability is historically low, as is the case with many African countries. In instances such as these, increased military spending may actually lead to more violence, particularly if government forces are the aggressors in a conflict. But if a state is confronting a legitimate security threat, this emphasis on military cuts seems illogical.

For example, in 1987 the IMF implemented an adjustment program in Uganda. At the time, the country had been involved in an armed civil conflict since 1981. Despite this fact, IMF programs encouraged and succeeded in implementing cuts in military spending: between 1989 and 1992, military spending fell from 2.6 percent to 1.6 percent



of the gross domestic product (GDP) (SIPRI 2007). Perhaps as a result of these cuts, the Ugandan army was not able to suppress the insurgency, and the conflict continued. Chappell's 1998 film "Our Friends at the Bank" documents negotiations between Museveni and his ministers and officials representing the World Bank and IMF. One of the most contentious points in the discussions was the inability of the government to provide sufficient financial support for its military in order to quash the long-running rebellion. So far their success in quashing the rebellion has been limited: the uprising continued through 2004, and although 2005 saw few battle-related deaths, the peace process has stumbled on several occasions (Uppsala 2006, BBC 2007). Had the Ugandan government been allowed more funding for its military, it is possible that the conflict would have escalated. It is also possible, however, that government forces would have been better equipped to suppress the conflict for good.

Thus it seems that the imposition of IMF conditionalities may have consequences beyond those popularly cited in the literature. Adjustment programs have long been criticized for their social consequences, but their role in causing armed conflict has received less direct attention. However, the IMF is not the only institution that imposes conditions on lending—its sister organization, the World Bank, also uses conditionality. Traditionally, the IMF has relied more heavily on policy reforms as a condition for financial support. In contrast, the World Bank has focused mainly on lending for specific projects, such as infrastructure or agricultural development (Fearon 1988). The Bank shifted this emphasis in the early 1980s with the introduction of its own structural adjustment programs. It began to provide balance of payments financing conditional on policy changes and administrative reform (Fearon 1988). Despite the increasing overlap

of Bank and IMF programs in areas such as tax policy and public administration, the two organizations still maintained distinct areas of expertise (World Bank 2001). Under adjustment programs, IMF conditionality largely remained focused on macroeconomic and structural policies, while the Bank's conditions addressed structural policies (those that are not directly related to macroeconomic policy), social policy and institutional reform (World Bank 2001).

Critics often maintain that IMF conditionality is more severe than that of the World Bank. Fearon states that “[t]he IMF stabilization programmes usually compromise the most economically essential and politically difficult reforms – devaluation, limits on the expansion of government spending and domestic credit, subsidy removals, and liberalized foreign-exchange allocation procedures” (1988, 125). Furthermore, a suitable macroeconomic framework—as determined by the IMF—is often a prerequisite for disbursement of World Bank loans (Fearon 1988, World Bank 2001). IMF conditionality is generally seen to result in more severe political consequences, but because the World Bank plays a significant role in areas such as bureaucratic reform and privatization—both examples where patronage resources are traditionally available—any analysis should control for the presence of World Bank loans. The Bank utilizes two lending instruments: “development policy lending” and “investment” lending. The “investment” category includes loans for specific projects such as technical assistance or investment in a certain sector. “Development policy lending” includes structural adjustment and poverty reduction support credits; these loans are generally tied to conditions related to structural, financial sector, and social policy reform, in addition to improving public sector resource management (World Bank 2007a). Loans focusing on development

policy are more relevant to this analysis since resulting policy changes would affect larger segments of the population.

Another form of conditionality falls under the Heavily Indebted Poor Country (HIPC) Initiative, a program launched by the IMF and World Bank in 1996 that aims to ensure that no country is overloaded with a debt burden it cannot manage (IMF 2007a). In order to qualify for debt relief under the HIPC Initiative, a country must demonstrate good performance under IMF- and World Bank-led programs, in addition to implementing further reforms such as increased social spending. Because debt relief would ease financial obligations of governments and allow them to devote more resources to public goods, the implementation of a HIPC program may offset some of the negative consequences of previous adjustment policies.

## **METHODS**

This analysis will use the Cox variant of a discrete time repeated events duration model, a form of event history analysis. This model examines the duration of peace, or length of time before a country experiences conflict. It will test the hypothesis that the implementation of an IMF program increases a country's risk of experiencing violent civil conflict. The model uses event history data; the country year is the unit of analysis.

### **Event History Analysis**

Event history analysis examines the duration and timing of events. Because timing plays a major role in political events such as civil conflict, this type of analysis is especially desirable for political science research. However, despite the increasing focus on processes of change in political science, empirical research still often focuses on fixed relationships occurring at a single point in time. Many scholars avoid this shortfall by using time-series or panel data, but even in these cases the temporal structure of the data is often ignored (Box-Steffensmeier and Jones 1997).

Political scientists are often “interested in knowing how the duration spent in one social state affects the probability some entity will make a transition to another social state” (Box-Steffensmeier and Jones 1997, 1414). Some examples include the amount of time a state takes to adopt a certain policy or, more relevant to this analysis, the length of time before a country experiences military conflict. In analyses such as these the timing of events is critical to understanding outcomes. Event history data, structured as a longitudinal record of when certain events happen to a sample of entities, examines the

effects of timing on outcomes (Allison 1984).

Traditional regression-based models, however, are not suitable for analyzing event history data. Event histories generally have two features that cause significant problems for traditional statistical models such as multivariate regression: time-varying covariates and censoring (Allison 1984). This analysis incorporates several control variables that fluctuate over time, such as GDP growth and regime type. A regression model, however, must treat all covariates as fixed. It cannot account for variation over time in the control variables, and therefore is unable to account adequately for the effects of timing on outcomes (Box-Steffensmeier and Jones 1997).

Another limitation of regression models is their inability to address problems of censored cases. If this analysis were to use a standard regression to measure the amount of time it takes a country to experience conflict (or the duration of peace), the dependent variable might be expressed in the number of years before a country experiences armed internal conflict. Those countries that do not experience conflict, however, present an analytical problem. It is impossible to assign a value to these countries because it is not known when, if ever, they will experience conflict. An alternative would be to assign the maximum value to the dependent variable—in this case 26 years, the number covered in the dataset. However, if these cases are included they are implicitly treated as having experienced conflict, when in fact they have not. If they are left out of the dataset altogether, the sample is biased because only countries prone to experiencing conflict would be represented (Box-Steffensmeier and Jones 1997). A possible solution may be to express the dependent variable as a dummy indicator. This method is also problematic, because a dummy variable would not capture the variation in time before a

state experiences conflict (Allison 1984, Box-Steffensmeier and Jones 1997). Event history models can avoid both of these problems.

Two of the key concepts in event history or duration models are the risk set and the hazard function. The risk set is the sample of cases that are at risk of experiencing an event. The hazard function represents the rate at which a duration ends in a given interval, assuming that it has not already ended prior to the start of the interval. It is interpreted as the risk of an event occurring, providing that it has not already occurred (Box-Steffensmeier and Jones 1997). In this analysis, the risk set is the sample of countries included in the analysis, and the hazard function represents the risk that each country has of experiencing conflict at any given time.

The data for this model are structured for a discrete-time repeated events analysis. Discrete time data are gathered at specific intervals, in this case once a year, even though changes may occur at any time. Because a country may experience multiple conflicts, it is appropriate to use a repeated events model. This allows for the estimation of the duration of peace preceding each instance of conflict, not just the first conflict episode.

## **Data**

The forty-eight countries of sub-Saharan Africa represent the population of possible cases. Four countries had to be excluded from the analysis due to missing data: no data is available for Somalia's GDP, and Equatorial Guinea, Eritrea, and Sao Tomé and Príncipe are all missing measures of fractionalization. Once these exclusions are taken into account, the total number of cases becomes forty-four. Table 1 lists the countries in the dataset, the dates of any conflict occurring in the country, IMF programs

**Table 1. Conflict and IMF Assistance by Country**

Country	Conflict Dates	IMF Programs	Total IMF Assistance (million SDRs)*
Angola	1980 – 2002** 2004	None	0
Benin	None	SAF 1989 – 1992 ESAF 1993 – 1999 PRGF 2000 – 2005	111.73
Botswana	None	None	0
Burkina Faso	1987	SAF 1991 – 1994 ESAF 1993 – 1999 PRGF 2000 – 2005	146.62
Burundi	1991 – 2005	SAF 1986 – 1989 ESAF 1991 – 1994 PRGF 2004 – 2005	87.80
Cameroon	1984	ESAF 1997 – 1999 PRGF 2000 – 2005	244.36
Cape Verde	None	PRGF 2002 – 2005	8.64
Central African Republic	2001 – 2002	SAF 1987 – 1990 ESAF 1998 – 1999 PRGF 2000 – 2002	45.76
Chad	1980 – 1994** 1997 – 2002 2005	SAF 1987 – 1990 ESAF 1995 – 1999 PRGF 2000 – 2005	117.58
Comoros	1989 1997	SAF 1991 – 1994	2.25
Congo, Republic of	1993 – 1994 1997 – 1999 2002	ESAF 1996 – 1999 PRGF 2004 – 2005	29.62
Congo, Democratic Republic of	1996 – 2001	SAF 1987 – 1990 PRGF 2002 – 2005	698.97
Côte d'Ivoire	2002 – 2004	ESAF 1994 – 2001 PRGF 2002 – 2005	515.88
Djibouti	1991 – 1994 1999	ESAF 1999 – 2000 PRGF 2001 – 2003	13.63
Ethiopia	1980 – 1991** 1996 – 2005	SAF 1992 – 1995 ESAF 1996 – 1999 PRGF 2001 – 2005	179.19
Gabon	None	None	0
The Gambia	1981	SAF 1986 – 1988 ESAF 1988 – 1991, 1998 – 1999 PRGF 2000 – 2005	50.07
Ghana	1981 1983	SAF 1987 – 1988 ESAF 1988 – 1992, 1995 – 1999 PRGF 2000 – 2005	848.07
Guinea	2000 – 2001	SAF 1987 – 1990 ESAF 1991 – 1999 PRGF 2000 – 2005	163.91
Guinea-Bissau	1998 – 1999	SAF 1987 – 1990 ESAF 1995 – 1998 PRGF 2000 – 2003	19.33
Kenya	1982	SAF 1988 – 1989 ESAF 1989 – 1994, 1996 – 1999 PRGF 2000 – 2005	423.32

Lesotho	1998	SAF 1988 – 1991 ESAF 1991 – 1994 PRGF 2001 – 2004	53.19
Liberia	1980 1989 – 1995 2000 – 2005	None	0
Madagascar	None	SAF 1988 – 1989 ESAF 1989 – 1992, 1996 - 1999 PRGF 2000 – 2005	234.88
Malawi	None	ESAF 1995 – 1999 PRGF 2000 – 2005	136.22
Mali	1990 1994	SAF 1988 – 1990 ESAF 1992 – 1999 PRGF 2000 – 2005	220.62
Mauritania	None	SAF 1986 – 1989 ESAF 1989 – 1999 PRGF 2000 – 2004	153.96
Mauritius	None	None	0
Mozambique	1980 – 1992**	SAF 1987 – 1990 ESAF 1990 – 1999 PRGF 2000 – 2005	317.31
Namibia	None	None	0
Niger	1992 1994 1996 – 1997	SAF 1986 – 1988 ESAF 1988 – 1991, 1996 – 1999 PRGF 2000 – 2005	159.69
Nigeria	2004	None	0
Rwanda	1991 – 1994 1997 – 2002	SAF 1991 – 1994 ESAF 1998 – 1999 PRGF 2000 – 2005	74.07
Senegal	1990 1992 – 1993 1997 – 2001	SAF 1986 – 1988 ESAF 1988 – 1992, 1994 – 1999 PRGF 2000 – 2005	424.89
Seychelles	None	None	0
Sierra Leone	1991 – 2000	SAF 1986 – 1989, 1994 – 1995 ESAF 1994 – 1998 PRGF 2001 – 2005	266.29
South Africa	1980 – 1988**	None	0
Sudan	1983 – 2005	None	0
Swaziland	None	None	0
Tanzania	None	SAF 1987 – 1990 ESAF 1991 – 1994, 1996 – 1999 PRGF 2000 – 2005	491.09
Togo	1986 1991	SAF 1988 – 1989 ESAF 1989 – 1998	100.38
Uganda	1981 – 1991 1994 – 2005	SAF 1987 – 1989 ESAF – 1989 – 1999 PRGF 2000 – 2005	501.36
Zambia	None	ESAF 1995 – 1999 PRGF 2000 – 2005	1257.03
Zimbabwe	None	ESAF 1992 – 1995	151.90

\*Total IMF assistance under the SAF, ESAF and PRGF from 1980 – 2005; 1 SDR = 1.53 USD

\*\*Start date of conflict precedes 1980



and total IMF assistance from 1980 – 2005. Out of these cases, nineteen countries experienced conflict after implementing an IMF-led structural adjustment or PRGF program. In addition, seven countries did not implement IMF programs and experienced no conflict. The remaining eighteen countries represent cases where either conflict occurred without any IMF programs being in place or conflict preceded the implementation of an IMF-led program.

Measurement for all variables will begin in 1980, the earliest year data are available in the IMF's World Economic Outlook Database, and continues until 2005, the most recent year all data are available.<sup>2</sup> Once a country experiences conflict it is dropped from the dataset. It reenters the year peace is reestablished. Though 1980 is a limitation imposed by availability of data, it is an acceptable start date since the height of the debt crisis had yet to hit and it is several years prior to the implementation of the first Structural Adjustment Facility in 1986. The model incorporates measurements on the control variables of economic grievances, exploitable resources, regime type, social fractionalization, population pressure, difficult geography, prior civil conflict and other forms of conditionality. Table 2 presents summary statistics of the variables.

### *Armed Civil Conflict*

In this analysis, the dependent variable of armed civil conflict is defined as a country having a minimum of 25 battle-related deaths a year, as defined in the Uppsala Conflict Data Program (UCDP)/Oslo International Peace Research Institute (PRIO) Armed Conflict Dataset. A dummy variable represents whether a country experienced

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<sup>2</sup> Djibouti and Namibia are two exceptions—GDP data is not available for Djibouti prior to 1987, and Namibia did not win its independence from South Africa until 1990.

**Table 2. Descriptive Statistics**

Variable	Observations	Mean	Std. Dev.	Minimum	Maximum
Conflict	939	0.543	0.227	0	1
IMF SAF	939	0.081	0.273	0	1
IMF ESAF	939	0.171	0.377	0	1
IMF PRGF	939	0.140	0.347	0	1
World Bank	939	0.347	0.476	0	1
HIPC	939	0.094	0.292	0	1
GDP	939	7.283	20.669	0.105	239.42
Per Capita GDP	939	960.533	1384.997	59.5	8853.7
GDP Growth	939	3.387	6.315	-27.2	106.3
Fractionalization	939	0.611	0.197	0.03	0.85
Fractionalization <sup>2</sup>	939	0.411	0.201	0.001	0.718
Enclave	939	0.215	0.411	0	1
Regime	939	4.697	1.531	1	7
Regime <sup>2</sup>	939	24.417	13.125	1	49
Population Density	939	67.179	98.988	1.57	614.78
Forest Cover	939	30.932	23.393	0.22	86.96
Topography	939	1.038	0.076	0.709	1.454
Prior Conflict (Absorbing State)	939	0.475	0.500	0	1
Prior Conflict (Proximity Log)	939	0.981	1.235	0	3.714

conflict in a given year: a measure of 1 indicates there was conflict; 0 represents the absence of conflict. Because it is reasonable to expect that a country with a history of conflict is more likely to experience internal violence, an additional independent control variable will reflect whether the country experienced conflict prior to 1980.

### *IMF Programs*

Countries often enter into standby arrangements prior to their accession to the Structural Adjustment Facility (SAF), the Enhanced Structural Adjustment Facility

(ESAF) or the Poverty Reduction and Growth Facility (PRGF). These standby arrangements are accompanied with very low levels of conditionality; therefore they are not included in this analysis. Because of the higher levels of conditionality associated with the SAF, ESAF and PRGF, only these three programs will be included in this model. In the literature, scholars do not often differentiate between the SAF and ESAF. Because these two programs differ in the level of financing and scope of conditionality, they will be tested as two separate dummy variables. In addition, critics argue that PRGF programs are essentially the same as structural adjustment, despite the PRGF's increased focus on poverty reduction. In order to ascertain whether these criticisms hold merit, PRGFs will also be tested separately. Therefore three dummy variables will indicate whether each country was taking part in an IMF-led SAF, ESAF or PRGF in a given year. An additional variable will represent the total amount in SDRs of IMF disbursements each year under the SAF, ESAF and PRGF.

The International Monetary Fund publishes a history of each member country's lending arrangements. Unfortunately, information contained on each country page is not accurate. Concessional lending arrangements in sub-Saharan African countries are classified as falling under either the SAF or PRGF. None of the countries is shown to have undergone an ESAF program, which is incorrect. Because the SAF was officially laid to rest in 1995, and the PRGF was not created until 1999, any program falling within this period appears to be misclassified. Several additional sources were required in order to properly classify each country's lending arrangements, including country documents available on the IMF website and Boughton's in-depth historical overview of the IMF's operations between 1979 and 1989 (2001).

Because IMF programs may contribute to an increased risk for civil conflict in many ways, an ideal analysis would include measures of the different mechanisms that may affect conflict. Proxies would include figures for social spending, military expenditures, overall budget cuts, privatizations and reductions in public jobs. Unfortunately, data for these indicators are rarely available before the early 1990s. Because the IMF introduced structural adjustment programs in 1986, the initial effects of these programs are not represented in the data. Due to this limitation, it is extremely difficult to parse out the main explanatory variable into the different causal pathways.

#### *Other Forms of Conditionality*

Dummy variables represent whether a country is also participating in a program involving other forms of conditionality. The World Bank projects database classifies each lending project into one of two categories: “development policy lending” and “investment” (World Bank 2007b). A country is coded as “1” if it is participating in development policy lending in a given year, and “0” if it is not. HIPC countries are coded in the same fashion; the data is taken from the IMF’s database of HIPC country documents (IMF 2007b).

#### *Economic Grievances*

In this analysis I use three proxies for economic grievances. Gross Domestic Product (GDP) indicates the overall economic condition of the country. A lagged GDP variable is included as well to control for autocorrelation. Per capita GDP represents

economic conditions at the individual level.<sup>3</sup> In addition, annual percent change in GDP reflects whether changing economic conditions impact conflict. Measurement is taken each year, and reflects current prices of the US dollar. The source of data is the September 2006 World Economic Outlook Database, published by the IMF. The Gini coefficient, which measures income inequality, would be a useful additional proxy for economic grievance. Unfortunately, consistent measures of the Gini coefficient are missing for a majority of the countries in the dataset, so this variable is not included in the model. This exclusion may be justified in that most countries in sub-Saharan Africa arguably have high levels of income inequality.

#### *Lootable Resources*

Leonard and Strauss (2003) provide the proxy measurement for lootable resources: enclave economies. They base their classification on the value of exports from minerals, timber and estate agriculture as a percentage of exports. A value of at least 75% classifies the country as having an enclave economy. The authors do not provide data for all countries, so information from the World Bank's World Development Indicators (WDI) database and the CIA World Factbook provide the data necessary to classify the countries excluded from their analysis.

#### *Regime Type*

Freedom House's *Freedom in the World* Country Rankings is used to code for regime type (2007). This framework assigns values to states, rating them on a scale of 1

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<sup>3</sup> Measures of Gross National Income may be a more suitable proxy to demonstrate foregone income opportunities, but data were not available for many countries. Thus, GDP data will serve as an appropriate substitute.

to 7 for the level of political rights and civil liberties. Countries with average scores of 1.0 to 2.5 are considered Free, those with scores of 3.0 to 5.0 are considered Partly Free, and those with scores of 5.5 to 7.0 are considered Not Free. Because the predicted relationship is curvilinear, a squared fractionalization term is included in the model.

### *Social Fractionalization*

Annett (2001) developed an index for the measurement of ethnolinguistic and religious fractionalization for the IMF. The author calculates fractionalization using data from the World Christian Encyclopedia. He produces measurements for 150 countries—a marked increase over previous indices such as the 1960 Soviet-produced index of ethnic fractionalization, which included only 119 countries and did not account for religious divides (Anett 2001). The fractionalization index measures the probability that two randomly selected individuals will belong to different ethnolinguistic and religious groups. Thus, a low score of 0 would represent an entirely homogeneous society, while a high score of 100 indicates complete heterogeneity. Theory suggests that countries with moderate scores would be more likely to experience protracted civil conflict. A squared term is included to allow for the possibility of a nonlinear relationship.

### *Resource Scarcity and Population Pressures*

Competition for resources is measured in terms of population density. The higher the density, the more likely people are to compete over resources in a given state. The World Development Indicators provide measurements on this variable.

*Difficult Geography*

Difficult geography is represented by two variables. The first is forest cover, expressed as a percentage of total land area covered by forest. The second is a proxy for topography, and is calculated as a ratio of a country's surface area to total land area. Higher ratios represent greater changes in elevation, which provides an estimation of mountainous regions in a country. All of these measurements come from the World Development Indicators.

*Prior History of Civil Conflict*

Two variables account for a country's past history of civil conflict. The first, an absorbing state dummy, reflect whether a country has experienced any violent civil conflict post-independence. A value of "1" reflects that the country saw at least 25 battle-related deaths in at least one year since gaining independence. The second variable estimates the fading impact of past conflicts on a country's likelihood of experiencing renewed violence. It is expressed as the natural log of the number of years since the previous conflict ended.

## RESULTS AND ANALYSIS

Table 3 reports the results of the model. Model fit is good:  $\chi^2$  is 112535, which far surpasses the critical value of 45.315 required to be significant at the  $p < .001$  level with twenty degrees of freedom. The coefficients for IMF-led structural adjustment and PRGF programs are actually negative, the opposite of the expected direction, but neither variable is statistically significant. However, the coefficient for the Enhanced Structural Adjustment Facility is 0.707, in the expected direction, and is significant. This indicates that ESAF programs increase a country's risk of experiencing civil conflict by 102.8%. Total IMF assistance is not significant, nor are controls for other forms of conditionality (World Bank and HIPC programs).

Both measures of the impact of prior conflict are significant in the expected directions. The absorbing state prior conflict dummy has a coefficient of 0.738, meaning that any post-independence conflict, regardless of when it occurred, increases the hazard of experiencing civil conflict by 109.2%. The coefficient of the proximity of prior conflict indicates that every one unit increase in the log of years since the prior conflict ended results in a 25.5% decrease in the hazard rate. When the effects of these two variables are calculated together, a country will no longer be at increased risk of renewed violence after about thirteen years. The coefficients for overall GDP and the lagged GDP variable are both significant. Interestingly enough, the GDP variable indicates that wealthier countries actually have a slightly higher risk of experiencing conflict. GDP growth is also significant, showing that for every one percent increase in GDP growth, the hazard rate decreases by about 7%. Both fractionalization variables are significant,



**Table 3. Predicting the Risk of Civil Conflict**

Variable	Coefficients (Standard Error)	P	Percent Change in the Hazard Rate
Constant	-10.141*** (3.110)	0.001	-100.0%
SAF	-0.762 (0.699)	0.275	-53.4%
ESAF	0.707* (0.418)	0.091	102.8%
PRGF	-0.304 (0.849)	0.720	-26.2%
Total IMF Assistance	-0.001 (0.002)	0.617	-0.1
World Bank Program	-0.045 (0.392)	0.909	-4.4%
HIPC Country	0.050 (0.690)	0.942	5.1%
GDP	0.099 (0.035)	0.005	10.1%
Lagged GDP	-0.105 (0.046)	0.024	-10.0
Per Capita GDP	-0.0004 (0.0003)	0.162	0.0%
GDP Growth	-0.070*** (0.026)	0.008	-6.8%
Fractionalization	5.090** (2.487)	0.041	16,139.0%
Fractionalization <sup>2</sup>	-6.188** (2.659)	0.020	-99.8%
Enclave	0.801** (0.415)	0.053	122.8%
Regime	2.232*** (0.803)	0.007	831.8%
Regime <sup>2</sup>	-0.239*** (0.086)	0.006	-21.3%
Population Density	0.001 (0.001)	0.352	0.1%
Forest Cover	-0.007 (0.011)	0.511	-0.7%
Topography	1.904 (2.023)	0.346	571.3%
Prior Conflict (Absorbing State)	0.738** (0.377)	0.050	109.2%
Prior Conflict (Proximity Log)	-0.295** (0.126)	0.019	-25.5%
Chi <sup>2</sup>	112.53***	0.000	
Log Pseudolikelihood	-159.00976		
n	44		

Note: Asterisks indicate statistical significance at the following levels: \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

indicating that the expected parabolic relationship is confirmed. Initial increases in the fractionalization measure lead to heightened risk of civil conflict, but once the fractionalization level reaches .41, that risk begins to decrease. Both regime variables are also significant, indicating a similar parabolic relationship. Once calculated, the inflection point is 4.67, indicating that the risk begins to decrease once the Freedom House score moves from 4.5 to 5.0. The presence of an enclave economy is also significant, increasing the hazard rate by 118%. None of the other control variables representing per capita GDP, population density, forest cover or topography are significant.

These results are quite interesting because critics of IMF conditionality tend to paint the different programs with one wide brush. Those who do acknowledge differences generally separate PRGF programs from structural adjustment, stating that the former does constitute a qualitative improvement over the latter. Critics who discuss structural adjustment programs, however, do not often differentiate between the original Structural Adjustment Facility and the Enhanced Structural Adjustment Facility. The findings, however, suggest that conditionality associated with the original SAF does not lead to increased instability, while conditions attached to the ESAF do place countries at a higher risk of civil conflict. It is thus important to revisit the differences between the two programs in order to determine what aspects of these programs account for these differing impacts.

As previously mentioned, the original SAF programs focused almost entirely on macroeconomic reform of fiscal, monetary and exchange rate policy. These conditions required decreased public spending and currency devaluations that disproportionately

affected poorer segments of the population. Heightened grievances resulting from these initial shocks would presumably lead to increased attractiveness for insurgency. It appears, however, that this was not the case. The SAF variable was not significant, and even if it had been it would indicate that the SAF is actually associated with a decreased risk of experiencing civil conflict. It may be possible that governments had some success in convincing their constituents that the difficult short-term consequences of adjustment were necessary to ensure long-term economic sustainability and prosperity.

The transition to the ESAF represented a broadening in the scope of IMF conditionality. ESAF programs relied on structural measures such as improving the tax structure (widening the tax base), strengthening public expenditure management, removing subsidies and privatizing state-owned enterprises. By definition, these reforms were more intrusive and were designed to hold governments more accountable for their performance under the ESAF. It is a reasonable assertion that the conditions attached to ESAF programs therefore dealt a major blow to patronage networks—an intended effect of IMF conditionality. SAF programs did require overall budget cuts that undoubtedly limited the financial resources available to patronage-based governments. These systems, however, traditionally relied on a wide variety of patronage resources extending beyond monetary payments. Governments could provide jobs, favorable import quotas, tax breaks and other concessions to their preferred clients. The implementation of SAF programs therefore only restricted one of the major patronage resources: money. Non-monetary patronage resources were still largely intact.

Structural conditionality associated with the ESAF, however, cut much deeper into patronage networks. Widening the tax base meant that it would be more difficult for

governments to give tax breaks to preferred clients. Increased focus on privatizing state-owned enterprises and streamlining the bureaucracy decreased the number of public jobs available. Trade liberalization limited governments' ability to reward their supporters with concessions such as favorable import quotas. ESAF programs thus severely restricted patron-client systems, an intended effect of conditionality, but they also had unintended consequences in that they apparently led to an increased risk of violent civil conflict.

This risk decreases with the introduction of PRGF programs, perhaps because the IMF issued new guidelines on conditionality at this time. Internal assessments have found that under the PRGF conditionality is being used more sparingly and is more focused on the IMF's core area of responsibility, macroeconomic policy, rather than on structural reforms (IEO 2005).

In order to better understand which structural reforms have the most impact on civil conflict, an ideal analysis would incorporate measures of these conditions: privatizations, reductions on public jobs, changes to the tax structure and other proxies. Unfortunately these data are not available for much of the time period examined in this analysis. Therefore it is not possible to dissect ESAF programs into the different causal pathways in a quantitative analysis such as this. Future research in this area would benefit from in-depth case studies of the impacts of structural conditionality on patronage networks.

## CONCLUSION

In sum, IMF conditionality has led to a host of problems in sub-Saharan African countries. Conditionality programs required policies that had particularly negative consequences for the poor, such as currency devaluation and social spending cuts. Decreased patronage resources limited governments' ability to provide concessions or side-payments to potentially restive populations. Finally, cuts in military spending may have made states unable to quash rebellion when it did occur. All of these problems potentially increase a country's risk of experiencing internal conflict.

The results of this analysis support the hypothesis that IMF conditionality increases the risk of conflict. Structural conditions attached to the ESAF may have limited the availability of patronage resources to such an extent that governments were no longer able to maintain the stability of patron-client systems. Grievances increased, political support eroded, and in many cases civil conflict ensued. SAF and PRGF programs are not associated with the high level of invasive structural conditions found in ESAF programs, and neither of these variables was significant. Prior conflict, negative GDP growth, moderate levels of social fractionalization, transitional regimes and the presence of enclave economies all significantly increase conflict risk. Due to the lack of quantitative data on many of the structural conditions associated with IMF programs, future research utilizing in-depth case studies would provide a more complete understanding of the linkages between IMF conditionality and armed civil conflict.

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